Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) Method for controlling a screening machine comprising at least one screen surface, feeding means that feed material to be screened towards the screen surface and onto the screen surface where the material is separated into a first fraction remaining on the screen surface and into a second fraction passed through the screen surface while the material is moving along the screen surface, **characterized** in that the amount of material on the screen surface (6a) is determined by automatic measurement, and the feeding speed of the feeding means (5) is controlled on the basis of the measurement by automatic control (C) in such a manner that the feeding speed is changed to a different feeding speed in one of the following ways:

- upper and lower preset values (val_{max}, val_{min}) for the measurement value (val_m) of a variable dependent on the amount of material on the screen surface are used and when the measurement value (val_m) passes one of the preset values, the speed of the feeding means is lowered, and when the measurement value passes the other preset value, the speed of the feeding means is increased, or
- when the speed of change of the measurement value (val_m) of the variable exceeds a preset value ($(\Delta val_m/\Delta t)_{max}$), the speed of the feeding means is changed.

2. (Original) Method according to claim 1, **characterized** in that the amount of material on the screen surface is determined by measuring a variable of the movement of the screen surface or a variable of the drive means of the screen surface causing the movement of the screen surface.

3. (Original) Method according to claim 1, **characterized** in that the amount of material on the screen surface is determined by measuring the load caused by the material on any of the processing units of the screening machine or on any machine following the screening machine and extending the process of the screening machine and being connected to the control system of the screening machine.

4. (Currently Amended) Method according to claim 2 ~~or 3~~, **characterized** in that the load caused by the material on the screen is measured by measuring a variable of the screen drive means causing the transport or processing of the material on the screen surface.

5. (Original) Method according to claim 4, **characterized** in that the variable is a drive pressure, drive current or drive running speed.

6. (Original) Method according to claim 3, **characterized** in that the processing unit is any of the following: discharge conveyor, shredder, crusher.

7. (Original) Method according to claim 6, **characterized** in that the load is determined by measuring any of the following variables:

- drive pressure of the discharge conveyor, shredder or crusher,
- drive current of the discharge conveyor, shredder or crusher,
- running speed of the discharge conveyor, shredder or crusher.

8. (Original) Method according to claim 3, **characterized** in that the machine following the screening machine and extending the process of the screening machine and being connected to the screening machine's control system is any of the following:

- second screening machine
- crushing machine
- conveying machine.

9. (Original) Method according to claim 3, **characterized** in that the load caused by the material is determined by the load of the engine caused by the material.

10. (Original) Method according to claim 3, **characterized** in that the load caused by the material is determined by the temperature of the hydraulic fluid of the hydraulic system.

11. (Currently Amended) Method according to ~~any of the preceding claims~~claim 1, **characterized** in that a maximum speed and a minimum speed are preset for the feeding means.

12. (Currently Amended) Method according to ~~any of the preceding claims~~claim 1, **characterized** in that when the measurement value (val_m) has been beyond the preset value for a period that exceeds a predetermined maximum time (t_{max}), the speed of the feeding means is lowered below a preset value.

13. (Original) Method according to claim 12, **characterized** in that the feeding means are stopped.

14. (Original) Screening machine comprising at least one screening surface (6a), feeding means (5) arranged to feed material to be screened towards the screen surface and onto the screen surface, the screen surface being capable of separating the material into a first fraction (F1) remaining on the screen surface (6a) and into a second fraction passed trough the screen surface while the material is moving along the screen surface, the screening machine further comprising sensors measuring the state of the screening process, **characterized** in that

- a sensor (S) is arranged to measure a variable dependent on the amount of material on the screen surface;
- a controller (C) to which said sensor (S) is connected through a data transmission line to receive a measurement value related to said variable from the sensor;
- an actuator (A) operatively connected to the feeding means and arranged to change the feeding speed of the feeding means; whereby

said controller (C) is connected to said actuator (A) through a data transmission line and arranged to give a control command to said actuator in response to the measurement value (val_m) received from the sensor (S) to change the feeding speed of the feeding means to a different feeding speed in one of the following ways:

- an upper preset value (val_{max}) and a lower preset value (val_{min}) for the measurement value are programmable and changeable in the controller (C) and the controller is arranged to give a speed reducing control command to the feeding means when the measurement value (val_m) passes one of the preset values (val_{max}, val_{min}), and a speed increasing control command when the measurement value passes the other preset value, or
- a preset value ($(\Delta val_m/\Delta t)_{max}$) for the speed of change of the measurement value (val_m) is programmable and changeable in the controller (C) and the controller is arranged to give a

speed changing control command to the feeding means when the speed of change exceeds the preset value ($(\Delta val_m/\Delta t)_{max}$).